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Canadian Institutes of Health Research

Fall 2008

Your Health Research Dollars at Work

An Update from the Canadian Institutes of Health Research

President's Message

To all new and returning Members of Parliament, let me offer my congratulations on your election to Parliament. I would also like to welcome you to CIHR's quarterly newsletter, *Your Health Research Dollars at Work*. The newsletter provides important information that we hope you will appreciate about made-in-Canada health research successes.

As has been made clear by the Government of Canada in its Science and Technology Strategy, research and innovation play a key role in Canada's economy. With the decline of Canada's manufacturing sector and the up-and-down nature of the resource industry, science and innovation are the only areas where one can reasonably make an investment and expect, over the long term, to see dividends in terms of a highly-educated workforce, the creation of powerful new intellectual property, new innovations and new companies interested in and capable of exploiting these innovations.

Health research is also key to optimal health care and improved health services. It directly impacts the economy through its contribution to a healthy and productive workforce.

CIHR will help deliver these benefits through our commitment to research excellence and strong partnerships, especially with the private sector, international partners and other federal granting councils. As President of CIHR I'm committed to ensuring that research is effectively transferred to places where it can have the utmost impact, such as improving clinical practices, creating opportunities for the private sector and priorities for evidence-based health-care policies.

Alain Beaudet, MD, PhD
President
Canadian Institutes of Health Research

TERMINATING CANCER

CIHR Joins Historic Canada-California Cancer Agreement

CIHR is among the Canadian agencies, partners and governments contributing $100 million to the Cancer Stem Cell Consortium (CSCC), as part of an historic collaboration with Californian scientists to better understand the role stem cells play in the development of cancer.

Photo courtesy of The Canadian Press Images/Denis Paiva

Then Health Minister Tony Clement, right, shakes hands with California Gov. Arnold Schwarzenegger, at the BIO 2008 International Convention, June 18, in San Diego, to celebrate an agreement between Canada and California to accelerate cancer stem cell research.

Canada and California are both world leaders in cancer stem cell research. This agreement will create a pool of expertise with a greater potential to make major advances in detecting and targeting cancer stem cells.

"By working together across borders and bringing together the top scientists from both countries to tackle cancer stem cell research, I believe we will be able to shorten the time to bring great improvements to the lives of those affected by cancer," said then Health Minister Tony Clement, in a news release issued at Bio2008.

"California is committed to being a leader in stem cell research, but no one state or nation should do this alone," stated Governor Arnold Schwarzenegger. "Entering into collaborations such as this, which bring together leading medical research capabilities, have great potential in improving the lives of not only Californians, but people around the world."

(Continued on next page)

About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's agency for health research. CIHR's mission is to create new scientific knowledge and to catalyze its translation into improved health, more effective health services and products, and a strengthened Canadian health-care system. Composed of 13 Institutes, CIHR provides leadership and support to nearly 12,000 health researchers and trainees across Canada.

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(Continued from cover)

The three-year agreement, which will begin as early as this fall, lays the foundation for the California Institute for Regenerative Medicine (CIRM) and CSCC to explore collaborative approaches to evaluating, funding and monitoring cancer stem cell research projects.

"An international collaboration involving Canada and California, with a focus on cancer stem cells, can be expected to raise research in this field to a much higher level," said Dr. Jim Till, President of the CSCC.

NATIONAL

Guelph Student Wins "Best Brain in Canada" Title

Isdin Oke from Centennial CVI high school in Guelph, Ontario, took top prize in the first CIHR Canadian National Brain Bee for his knowledge of neuroscience and skill at patient diagnosis and neuroanatomy. The competition, held at McMaster University in May, awarded Isdin $1,500, a trophy and a summer internship in a neuroscience laboratory. Later in May, Isdin went on to represent Canada in the International Brain Bee Championship in Montreal, taking a third place finish against students from the United States, Australia and India.

Canada's top contenders from the National Brain Bee: (back row, from left) Evan Grant (Cole Harbour), Isdin Oke (national winner), Robbie Butt (Red Bay), Jenna Hotton (Montreal), Jeremy Zung (Toronto), Jenny Lee (Edmonton), Adriena De Visser (Coaldale); (kneeling, from left) Nicholas McGregor (Ottawa) and Calvin Perault (Kingston).

CIHR Invests $4.4 Million to Improve Mental Health of Canadians

Photo courtesy of CPimages/Jason Halstead

From left: Dr. Michel Tétreault, President/CEO of St. Boniface General Hospital, Dr. Joanne Keselman, Vice-President (Research), University of Manitoba, Steven Fletcher, Parliamentary Secretary for Health, Dr. Richard Brière, CIHR's Institute of Neurosciences, Mental Health and Addiction Assistant Director, and Dr. John Walker of the St. Boniface General Hospital.

Winnipeg, Toronto, London: Three research teams will share $4.4 million in grants to develop strategies and guidelines to address mental health issues. Steven Fletcher, Parliamentary Secretary for Health, announced the successful applicants on July 18. Dr. John Walker (University of Manitoba) will examine how we can support young adults with anxiety and depression; Dr. Melanie Barwick (The Hospital for Sick Children) will develop a model to bring evidence-based practices into the children's mental health and education sectors; and, Dr. Alison Niccols (McMaster University) will work with addiction centres' staff and researchers to ensure women with substance use issues and their children receive the best services and treatments.

Helping Health-Care Decision Makers Make the Right Choices

CIHR has strengthened a program designed to help health-care decision makers improve Canada's health systems. The Partnerships for Health System Improvement (PHSI) program supports a team approach to putting research into practice by linking researchers with decision makers in provincial health ministries, regional health authorities, hospitals or other health organizations. The aim is to focus on policy-relevant areas that are deemed high priority by Canada's health-care decision makers. It's one of the few programs at CIHR that lets a decision maker be the principal applicant on a grant. Health policy decision makers and researchers interested in working together to find solutions to health system problems are encouraged to take advantage of this program. For more information on the program and the application procedures, please visit the PHSI website at www.cihr-irsc.gc.ca/e/34347.html, or contact Meghan McMahon at 416-978-5172 or meghan.mcmahon@utoronto.ca.

Health Research with **Impact**

Health Research Has Real Impact

We know this, researchers know this, but what about Canadians and decision makers? To serve the information needs of Canadians, we have developed a web page on the CIHR website. This web page, entitled "Health Research with Impact", brings together content for the Canadian public in a single, easy-to-navigate location. Visit http://www.cihr-irsc.gc.ca/impact.html to learn more about the history of health research in Canada, exciting CIHR-funded projects, monthly research profiles and CIHR community outreach programs.

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INTERNATIONAL

Partnership to Accelerate Research on Alzheimer's Disease

Front row: Mr. Thierry Damerval, Inserm's Assistant Director General, Ms. Marielle Gascon-Barré, Acting President and CEO of FRSQ and Dr. Alain Beaudet, CIHR President. Back row: Mr. François Fillon, Prime Minister of France, and Quebec Premier Mr. Jean Charest.

Canada, France: CIHR has signed a co-operation agreement on Alzheimer's disease research with the health research funding organizations of Quebec (the Fonds de la recherche en santé du Québec – FRSQ) and France (the Institut national de la santé et de la recherche médicale – Inserm). The agreement focusses on research projects linked to the diagnosis, treatment or management of patients with Alzheimer's and related diseases.

McMaster-led Study Examines Safer Approach to Bypass Surgery

Dr. André Lamy

Is it better and safer to perform bypass surgery with the patient on a heart-lung machine that maintains blood circulation during surgery, or while operating on a beating heart? CIHR is helping to resolve this debate by funding the world's largest cardiac surgery clinical trial, involving 4,700 patients in 100 cardiac surgical centres across 16 countries. Led by Drs. André Lamy and Salim Yusuf at Hamilton Health Sciences, McMaster University, the 7.5-year CORONARY trial will investigate the differences in outcomes of the two techniques during coronary artery bypass surgery. "This trial will change practice around the world and play a key role in reducing complications for patients who undergo cardiac surgery," says Dr. Lamy.

WESTERN CANADA

Study Identifies an SOS Response to Cancer-Causing Agents

Saskatoon: University of Saskatchewan microbiologist Dr. Wei Xiao has found a way to trigger a protein combination called 9-1-1 that acts as an SOS signal for cells to fight cancer-causing agents such as industrial toxins, ultraviolet radiation and X-rays. The CIHR-supported study is seen as a breakthrough in cancer research that could lead to better cancer diagnosis through targeting defective genes. It may also pave the way for a drug that activates the SOS response in cells.

Microbiologist Working on Vaccines Against Bioterrorism

Dr. Donald Woods

Calgary: Dr. Donald Woods, a researcher at the University of Calgary, is studying and testing vaccine preparations for the prevention of widespread bacterial diseases, including some emerging pandemic diseases, as part of a long-term CIHR study. He is focussing on two significant agents of bioterrorism – *Burkholderia mallei (B. mallei)* and *B. pseudomallei*. "It is important to develop a vaccine against both of these organisms because they are very difficult to treat with antibiotics and even with appropriate antibiotic treatment, mortality is still high," says Dr. Woods, who recently received a $1.7-million grant from the U.S. National Institute of Allergy and Infectious Diseases to further his research.

Shutting Down Cancer 'Factories' to Prevent Breast Tumours

Dr. Afshin Raouf

Vancouver: Results from a CIHR-funded study conducted at the BC Cancer Agency may have found new ways to identify and shut down stem cells that act as cancer 'factories' to produce breast tumour cells. The lead author, Dr. Afshin Raouf, says these findings will help determine what turns a normal breast stem cell into a cancerous one. "Then, we can be smarter and more specific about treatment. Instead of bombarding a patient with chemotherapy, we can target a few specific gene products," says Dr. Raouf.

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CENTRAL CANADA

Joint Replacement Patients Not Receiving Proper Treatment

Montreal: Most patients in Quebec are not receiving the drugs they need to reduce the risk of potentially life-threatening blood clots, according to a CIHR-funded study. McGill University's Dr. Elham Rahme and her team analyzed the medical records of 7,058 Quebec hip and knee replacement patients and discovered that only 19% received post-discharge antithrombotic treatment. Official treatment guidelines recommend at least 10 days, and up to 35 days, of treatment after surgery.

Aerobics Two Weeks After a Stroke Can Improve Mobility

Dr. Dina Brooks

Toronto: Treadmill training and stationary cycling just two weeks after a stroke can help patients become fitter, walk further and enjoy better cardiovascular health than those who remain inactive, according to a CIHR-funded study led by Drs. Dina Brooks and William McIlroy at the Toronto Rehab Institute. "We need to build awareness of just how important exercise is, because it's a non-pharmacological intervention that virtually everybody can benefit from," says Dr. Brooks. The Toronto Rehab team is one of the few groups in the world exploring the benefits of aerobic exercise for people who have suffered a stroke.

Preventing Diabetes Among Overweight Moms

Dr. Michelle Mottola

London: A CIHR-funded health promotion program that has helped Aboriginal women in London stay healthy during pregnancy is expanding to other communities across Ontario. Led by Dr. Michelle Mottola at the University of Western Ontario, the Nutrition and Exercise Lifestyle Intervention Program works with Aboriginal women to prevent excessive weight gain and regulate blood sugar levels during pregnancy. The program takes a holistic approach to health living, encouraging Aboriginal women to eat well and exercise and then pass these lifestyle choices onto their family and their community.

EASTERN CANADA

Dalhousie Team Searches for New Antibiotics to Cure Cancer

Dr. David Jakeman

Halifax: Dr. David Jakeman and his research team at Dalhousie University are working to generate antibiotics with greater selectivity and power for treating cancer and infectious diseases. Funded in part by CIHR, the investigation has already isolated more than 20 new antibiotics, and is now testing these against bacteria that cause human diseases and various cancer cell lines to determine their therapeutic potential.

CIHR's *Your Health Research Dollars at Work* is available to Members of Parliament, Senators and policy makers to communicate the benefits of the Government of Canada's investment in health research. News items can be reproduced for use in householders and other communications materials. Visit CIHR's website to download this issue in electronic form, at **www.cihr-irsc.gc.ca**. If you would like a copy, please contact Caroline Kay, CIHR's Publications Production Coordinator, at **caroline.kay@cihr-irsc.gc.ca**.

Upcoming Events/News

Each month: Café Scientifiques in cities across Canada dealing with topical health issues.
www.cihr.gc.ca/cafe_scientifique.html.

CIHR Health Research Awards: A Celebration of Excellence in Canadian Health Research,
November 19, 2008,
National Gallery of Canada, Ottawa.
www.cihr-irsc.gc.ca/e/27894.html.

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